Message

From: Guilherme Sousa Alves [guilherme.alves@unl.edu]
Sent: 6/22/2020 4:48:48 PM
To: Hathaway, Margaret [Hathaway.Margaret@epa.gov]
CC: Kenny, Daniel [Kenny.Dan@epa.gov]; Greg Kruger [greg.kruger@unl.edu]
Subject: RE: 2018 Field trial questions from EPA
Attachments: Supplementary table.xlsx

Flag: Follow up

Hello Margaret,

Everything is fine here and I hope you are doing well too.

Here are my answers for those questions:

1. Air concentrations were collected right in the center of the sprayed area (0.15, 0.33, 0.56, 0.89, and 1.50 m above canopy). I have attached a table where you will find all information regarding air concentration, meteorological data, and flux results.

2. a, b, and c. The spray solutions were a tank mixture of XtendiMax with VaporGrip and Roundup PowerMax at 560 plus 1260 g ae/ha, respectively. In addition, Intact and FS Intention were added to the solution at 0.5% v/v rate in NE and MS, respectively. Nozzles used were TTI 11004 at 40 PSI. The volumetric median diameter (VMD) of droplets and volume percentage of droplets finer than 200 um (V200) were measured using a laser diffraction system in a wind tunnel. The solution and nozzle combination used in NE produced a VMD of 1010 um and V200 of 0.42%, whereas the solution and nozzle combination used in MS produced a VMD of 906 um and V200 of 0.68%. In NE, applications commenced at 4:02 pm and lasted for 10 min on July 7th, 2018, whereas in MS, applications commenced at 5:30 pm and lasted for 15 min on June 27th, 2018. No rainfall was observed during data collection.
   Applications were made on dicamba-tolerant (DT) soybeans at R1 (Block 1) and V3 (Block 2) growth stages. Soybean heights at R1 stage were 61 cm in NE and 58 cm in MS, whereas at the V3 stage soybeans were 36 cm in NE and 25 cm in MS. In each site, both blocks were sprayed at the same time using two different self-propelled sprayers with a similar set up. Two John Deere R4038 sprayers equipped with a 36.6-m boom and 38-cm nozzle spacing were used in NE. In MS, two John Deere 6700 sprayers equipped with a 18.3-m boom and 51-cm nozzle spacing were used. Nozzles were positioned 61 cm above canopy level. Travel speeds of sprayers were 4.7 m/s in NE and 3.5 m/s in MS in order to deliver 140 L/ha carrier volume.

3. In NE, DT soybean Asgrow AG27X7 was planted at 250,000 seeds/ha (2 cm depth and 0.76 m row spacing) on May 7th, 2018 (Block 1) and May 25th, 2018 (Block 2). The sprayed area of both blocks was 4.04 ha. In MS, DT soybean Asgrow AG47X6 was planted at 321,000 seeds/ha (2.5 cm depth and 0.19 m row spacing) on May 15th, 2018 (Block 1) and June 6th, 2018 (Block 2). The sprayed areas of Block 1 and Block 2 were 3.64 ha and 3.87 ha, respectively. Non-DT soybeans were planted outside the sprayed areas on the same day as DT soybeans were planted at Block 2, which means that non-DT soybeans were at V3 stage in both blocks when applications were made. In NE, Credenz 2601LL was planted at 250,000 seeds/ha (2 cm depth and 0.76 m row spacing), and in MS, Asgrow AG4632 was planted at 321,000 seeds/ha (2.5 cm depth and 0.19 m row spacing).

4. In NE and MS, blocks were located 800 and 1,700 m apart to each other, respectively.

5. Unfortunately, I do not have any information regarding the tank pH or the pH of water used for applications.

Please, let me know if I can help with anything else.

Thank you!

Guilherme

From: Hathaway, Margaret <Hathaway.Margaret@epa.gov>
Sent: Wednesday, June 17, 2020 3:33 PM
To: Guilherme Sousa Alves <guilherme.alves@unl.edu>
Cc: Kenny, Daniel <Kenny.Dan@epa.gov>
Subject: 2018 Field trial questions from EPA

Hello Guilherme:
I hope you are doing well.

My colleagues in EFED have been reviewing your research data and have some questions regarding your 2018 field studies conducted in Roscoe, NE and Starkville, MS. Once again, thank you very much for sharing your work with my office! Please let me know if any of the questions are unclear.

Questions re. Dr. Alves NE and MS 2018 field trials:

1. It looks like air concentrations were collected at the center of the fields. I was wondering if they could share that data? I didn't see it in any of the files that were submitted.
2. Can Dr. Alves provide some information on the application itself, particularly:
    a. What products were applied, what was the rate, and what was the time of day for the applications?
    b. What type of equipment was used for the application (i.e., number and type of nozzles, boom length)?
    c. How high above the canopy were the applications made?
3. Was the treated field DT soybean the surrounding area non-DT soybean? When were they planted and at what stage was the application made?
4. Approximately how far apart were the treated fields?
5. Are there measurements of the tank pH or the pH of the water used for application?

Thank you,
Meg

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